

Listing of the Claims:

1. In a supported shear of the type which shears tube stock by lateral displacement of adjacent lengths of stock along a shear plane extending orthogonally through the stock:
a mandrel to be placed within the stock;
stationary tooling for receiving and holding said stock;
movable tooling adjacent the stationary tooling for receiving said stock; and
means including first and second hydraulic cylinders for alternately driving said movable tooling in opposite directions through an orbital path relative to the stationary tooling.
2. (Cancelled) Apparatus as defined in claim 1 wherein the means for driving includes first and second hydraulic cylinders.
3. Apparatus as defined in claim 1 wherein said means for driving further comprises:
a pinion connected to said movable tooling;
a first rack engaged with the pinion and mounted for linear translation to rotate said pinion in a first direction; and
a second rack engaged with the pinion and mounted for linear translation to rotate said pinion in a second direction.
4. (Currently Amended) Apparatus as defined in claim 3 further comprising:
a hydraulic power means for causing simultaneous linear translation of said first and second rack in opposite direction.
5. Apparatus as defined in claim 4 further including means for varying the power level of said hydraulic power means during translation of said rack.
6. (Currently Amended) Apparatus as defined in claim 3 wherein the total linear displacement of said first rack is at least approximately equal to one revolution of said ~~drive shaft~~ pinion.
7. (Cancelled) Apparatus as defined in claim 1 wherein:

said stock is tubular; and
said shear further comprises a mandrel extensible into said stock in the location of the shear plane to maintain the shape thereof during a shearing operation.

8. (Cancelled) For use in combination with a bladeless shear for linear stock which shear comprises a stock-receiving ram having an eccentrically driven wheel disposed therein, a wheel drive comprising:
a drive shaft connected to said wheel;
a pinion connected to said shaft for rotation therewith;
first and second racks engaging said pinion and linearly translatable to rotate the pinion in respective first and second opposite directions; and
power means for translating said racks.

9. (Cancelled) In a bladeless shear device of the type having first and second tools aligned with a work piece axis and means for causing orbital motion of one of the tools relative to the other:
an actuator having a linearly translating drive component; and
means for converting the linear translation of the drive component into orbital motion of said one tool.

10. A supported shear for the bladeless shearing of tube stock disposed on a mandrel comprising:
a first, fixed die for holding the stock;
a second, movable die for holding the stock immediately axially adjacent the first fixed die to define a shear plane between the two dies; and
means for alternately driving the second, movable die in opposite directions through an orbital path.

11. A shear as defined in claim 10, wherein the means for driving comprises first and second hydraulic cylinders operatively connected to drive the second, movable die.